

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions of claims in the application.

1-2. (Canceled)

3. (Currently Amended) ~~A semiconductor device according to claim 2, wherein A~~
semiconductor device comprising:
a plurality of ferroelectric capacitors for memory in which each one end thereof is
connected to each of a plurality of first bit lines via switching transistor;
first plate lines connected to the other ends of said ferroelectric capacitors for memory;
first ferroelectric capacitors for reference in which each one end thereof is connected to a
second bit line via first n-channel MOS transistor;
a second plate line connected to the other ends of said first ferroelectric capacitors for
reference; and
a p-channel MOS transistor connected to said second plate line, wherein said p-channel
MOS transistor is formed in a plate driver circuit to which said first plate lines and said second
plate line are connected;
wherein
said plate driver circuit has a structure that the circuit applies voltage lower than that of
said second bit line to said second plate line via said p-channel MOS transistor in an ON state of
said p-channel MOS transistor;

4. (Currently Amended) A semiconductor device according to ~~claim 1~~ claim 3, wherein said switching transistor is n-channel MOS transistor.

5. (Currently Amended) A semiconductor device according to ~~claim 1~~ claim 3 further comprising:

a sense amplifier that amplifies voltage variation quantity of said first bit lines and voltage variation quantity of said second bit line.

6. (Currently Amended) ~~A semiconductor device according to claim 1~~ A semiconductor device comprising:

a plurality of ferroelectric capacitors for memory in which each one end thereof is connected to each of a plurality of first bit lines via switching transistor;

first plate lines connected to the other ends of said ferroelectric capacitors for memory;

first ferroelectric capacitors for reference in which each one end thereof is connected to a second bit line via first n-channel MOS transistor;

a second plate line connected to the other ends of said first ferroelectric capacitors for reference; and

a p-channel MOS transistor connected to said second plate line;

and further comprising:

second ferroelectric capacitors for reference in which each one end thereof is connected to a third bit line via second n-channel MOS transistor;

a third plate line connected to the other ends of said ferroelectric capacitors for reference;
and
a third n-channel MOS transistor connected to said third plate line.

7. (Original) A semiconductor device according to claim 6, wherein the number of said first ferroelectric capacitors for reference is 1% or less of a total number of said second ferroelectric capacitors for reference and said first ferroelectric capacitors for reference.

8. (Currently Amended) ~~A semiconductor device according to claim 1,~~ A semiconductor device comprising:

a plurality of ferroelectric capacitors for memory in which each one end thereof is connected to each of a plurality of first bit lines via switching transistor;

first plate lines connected to the other ends of said ferroelectric capacitors for memory;

first ferroelectric capacitors for reference in which each one end thereof is connected to a second bit line via first n-channel MOS transistor;

a second plate line connected to the other ends of said first ferroelectric capacitors for reference; and

a p-channel MOS transistor connected to said second plate line;

wherein said first ferroelectric capacitors are elements to which data having minus polarization charge is written before heat treatment.

9. (Original) A semiconductor device according to claim 8, wherein said heat treatment is performed at 200°C or more.

10. (Canceled)

11. (Currently Amended) ~~A semiconductor device according to claim 10, A~~
semiconductor device comprising:
a memory cell region of 2T2C type, which stores 1-bit by first and second transistors and
first and second ferroelectric capacitors for memory; and
a memory cell region of 1T1C type, which stores 1-bit by a third transistor and a third
ferroelectric capacitor for memory;
wherein said memory cell region of 2T2C type is a region corresponding to a range having 1% or less of the number of said bits.

12. (Currently Amended) ~~A semiconductor device according to claim 10, A~~
semiconductor device comprising:
a memory cell region of 2T2C type, which stores 1-bit by first and second transistors and
first and second ferroelectric capacitors for memory; and
a memory cell region of 1T1C type, which stores 1-bit by a third transistor and a third
ferroelectric capacitor for memory;

wherein said memory cell region of 2T2C type is a region to which data is written before heat treatment.

13. (Original) A semiconductor device according to claim 12, wherein said heat treatment is performed at 200°C or more.